

철강업체의 생산계획 수립을 위한 Product-Mix 모형의 개발과 적용

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The purpose of this study is to develop product mix models and production planning systems which can draw optimal product mix for profit maximization and related decision support information for Company P. Traditionally, Company P's production strategy emphasized maximizing production quantity. However, since the company established its one-company-two-plant production system, there has been a growing need for adjusting its production strategy from productivity maximization to profitability maximization. In this study, two production planning systems were developed for Company P: Production Planning System by Product and Size, and Production Planning System by Steel Grade that accommodates a more detailed classification of variables than the former.

The Production Planning System by Product and Size was fully tested, verified, and validated with the company's data. When applied to Company P's 1991 production planning, the system resulted in a production plan with substantially higher profit than the one proposed by Company P. The Production Planning System by Steel Grade was also tested and verified with actual data. However, in order to be applicable to Company P's production planning, it needs

more improvement in terms of data availability and classification. In addition to the realization of higher profit, the output from the solution process of the systems provided decision support information, which can be useful in making decisions regarding production strategy.